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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/818,499 | 03/28/2001 | Shinji Tadaki | 1082.1036 | 2280 |
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EXAMINER

PERRY, ANTHONY T

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/818,499

Applicant(s)

TADAKI ET AL.

Examiner

Anthony T Perry

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 21-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 28 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 21-27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner cannot determine what is meant by “a transmissivity of 10%/10 μ m or less to visible light” in claim 15, lines 2-3. Similarly the examiner cannot determine what is meant by “dielectric layer has a reflectance of 50%/10 μ m or more” in claim 16, line 2. Likewise, the claims have not been further treated based on the merits.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Horiuchi et al. (JP 10-146273) (US patent 6,184,621 used as translation).

Regarding claims 1, 2, 3 and 4, Fig. 1 shows a plasma display panel comprising electrodes arranged on a substrate on a rear-side, a dielectric layer provided covering the electrodes and a fluorescent layer formed on the front-side of the dielectric layer. The layer is formed of a mixture of a base material (glass) and a filler such as silica powder, alumina powder, etc. (col. 13, lines 43-45). The filler has a smaller relative dielectric constant than the base material, and the dielectric layer has a smaller relative dielectric constant and a larger reflectance than a layer formed of the base material without the filler. The relative dielectric constant of the dielectric layer is less than 10.

Regarding claim 6, the Horiuchi references teaches the thickness of the dielectric layer is preferably from 5 to 20 μ m in terms of the formation of a uniform dielectric layer and therefore teaches a thickness less than 10 μ m. If the thickness exceeds 20 μ m then, at the time of firing, the removal of the organic component is difficult and cracks are readily produced and, furthermore, the stress applied to the substrate is large, so there is the problem that the substrate warps. Moreover, with less than 5 μ m it is difficult to secure thickness uniformity (col. 11, lines 23-31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 7-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al. (JP 10-146273) (US patent 6,184,621 used as translation).

Regarding claim 5, it is noted that the applicant's specific type of filler being hollow micro-balloons, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any appropriate filler (silica, glass micro-balloons, alumina, etc.) for the dielectric layer as long as it reduces the relative dielectric constant and increases the reflectance.

Regarding claims 7 and 8, the Horiuchi reference teaches a plasma display panel comprising a dielectric layer in which a filler for enhancing reflectance is dispersed (col. 13, lines 43-45). It is noted that the applicant's specific type and shape of the filler being mica flakes with titanium dioxide coating, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any suitable type and form for the filler (hollow glass, silica powder, alumina particles, titania-coated mica flakes, etc.) for the dielectric layer as long as it reduces the relative dielectric constant and increases the reflectance.

Regarding claims 9-12, Horiuchi teaches of a dielectric layer containing silicon oxide, a low-melting-point glass, as a base material. Horiuchi further teaches that the filler make up 5-50 wt% of the dielectric layer which includes 10-50 wt% which is within the range of 10-80 wt% (col. 13, lines 31-49).

Regarding claim 13 and 17, in Fig. 1, Horiuchi teaches a plasma display panel substrate structure that comprises barrier ribs for partitioning a discharge space, wherein the sidewalls of the barrier ribs are covered with the dielectric layer.

Regarding claim 14 and 18, the barrier ribs may be black so as to improve the contrast (col. 15, lines 15-18).

Regarding claims 19-20, Fig. 1 of the Horiuchi reference shows a light-shielding layer (MgO layer) provided on the front side with respect to a discharge space and the dielectric layer provided on the rear side with respect to the light-shielding layer. The front plate portion of the plasma display panel in Fig. 1 shows a dielectric layer and a light-shielding layer (MgO layer) provided on a substrate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Gerlome et al. (US 5,605,781); Iijima et al. (US 5,264,758) ; and Gerlome et al. (US 5,464,726) ; and Haluska et al. (US 5,436,084)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is (703) 305-1799. The

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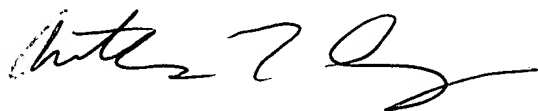
examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for this Group is (703) 308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [Anthony.perry@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Anthony Perry
Patent Examiner
Art Unit 2879
February 24, 2003



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